



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0997; Directorate Identifier 2012-NM-060-AD; Amendment 39-17729; AD 2014-02-01]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 2011-03-13 for certain Bombardier, Inc. Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, and Model CL-600-2D24 (Regional Jet Series 900) airplanes. AD 2011-03-13 required repetitive inspections of the rudder travel limiter (RTL) return springs and primary actuator, and corrective actions if necessary. This new AD requires replacing certain RTL return springs, including doing related investigative and corrective actions, if necessary; which is terminating action for the repetitive inspections. This new AD also revises the applicability. This AD was prompted by reports of failure of the RTL return spring. We are issuing this AD to prevent failure of the RTL, which would permit an increase of rudder authority beyond normal structural limits and consequently affect the controllability of the airplane.

DATES: This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of March 14, 2011 (76 FR 6539, February 7, 2011).

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2012-0997>; or in person at the Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; email thd.crj@aero.bombardier.com; Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

FOR FURTHER INFORMATION CONTACT: Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft

Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone (516) 228-7318; fax (516) 794-5531.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2011-03-13, Amendment 39-16597 (76 FR 6539, February 7, 2011).

AD 2011-03-13 applied to certain Bombardier, Inc. Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, and Model CL-600-2D24 (Regional Jet Series 900) airplanes. The NPRM published in the Federal Register on September 24, 2012 (77 FR 58787). The NPRM was prompted by reports of failure of the RTL return spring. The NPRM proposed to continue to require repetitive inspections of the rudder travel limiter (RTL) return springs and primary actuator, and corrective actions if necessary. The NPRM also proposed to require replacing certain RTL return springs, including doing related investigative and corrective actions, if necessary. The NPRM also proposed to revise the applicability. We are issuing this AD to prevent failure of the RTL, which would permit an increase of rudder authority beyond normal structural limits and consequently affect the controllability of the airplane.

Transport Canada Civil Aviation (TCCA), which is the airworthiness authority for Canada, has issued Canadian Airworthiness Directive CF-2010-18R1, dated March 19, 2012 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

Rudder Travel Limiter (RTL) return spring, part number (P/N) E0650-069-2750S, failed prior to completion of the required endurance test. In addition, the replacement RTL return spring, P/N 670-93465-1 (see Note) was found to be susceptible to chafing on the primary actuator, which could also result in eventual dormant spring failure. There are two return springs in the RTL and if both springs failed, a subsequent mechanical disconnect of the RTL components would result in an unannounced failure of the RTL. This, in turn, would permit an increase of rudder authority beyond normal structural limits and, in the event of a strong rudder input, the controllability of the aeroplane could be affected.

Note: RTL return springs, P/N 670-93465-1, were installed in production aeroplanes serial number 10266 (CL-600-2C10) and 15182 (CL-600-2D24) respectively and were introduced in-service by [Bombardier] Service Bulletin (SB) 670BA-27-047. [Bombardier] SB 670BA-27-047 has since been superseded by [Bombardier] SB 670BA-27-055.

This [TCCA] AD mandates repetitive [detailed] visual inspection of the RTL [for broken] return springs and [damage through the casing or chafing of the casing of the] primary actuator, [and] replacement of parts as necessary.

This revision mandates the installation of the RTL return spring, P/N BA670-93468-1, as a terminating action to this [TCCA] AD.

This AD expands the applicability by adding Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplane, serial number 10002. This AD also reduces the applicability by removing Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes serial numbers 10334 and subsequent; and also removes Model CL-600-2D15, serial numbers 15289 and subsequent. The installation consists of replacing certain RTL return springs with new springs and doing related investigative and corrective actions, if necessary. The related investigative action is a detailed inspection of the casing of the primary actuator

for signs of chafing or missing paint. Corrective actions include replacing any broken return spring with a new spring, repairing any chafing of the primary actuator on its casing, and replacing any primary actuator that has damage through its casing with a new actuator. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2012-0997-0003>.

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comments received.

Request to Correct Service Information

Mesa Air Lines Inc. (Mesa) requested that we correct a step sequence in Bombardier Service Bulletin 670BA-27-059, Revision A, dated March 8, 2012. Mesa stated that step (6) of the job set-up section, in Bombardier Service Bulletin 670BA-27-059, Revision A, dated March 8, 2012, specifies installing the rig pin. Mesa stated that it is not until step (10) that Bombardier Service Bulletin 670BA-27-059, Revision A, dated March 8, 2012, specifies removing panels 325DL and 325EL, and that removing these panels is necessary to install the rig pin.

We agree with the commenter's request regarding the incorrect step sequence. The manufacturer has issued Revision B to Bombardier Service Bulletin 670BA-27-059, dated September 26, 2013, which corrects the step sequence. We have revised paragraph (j) of this final rule to reference Bombardier Service Bulletin 670BA-27-059, Revision B, dated September 26, 2013; and added Bombardier Service Bulletin 670BA-27-059, Revision A, dated March 8, 2012, to paragraph (k)(2) in this final rule to

provide credit for the actions required by paragraph (j) of this AD, if those actions were performed before the effective date of this AD.

Request to Clarify Part Information

Mesa observed that Bombardier Service Bulletin 670BA-27-059, Revision A, dated March 8, 2012, does not mention, reference, or address part number (P/N) BA670-93470-5 (rudder travel limiter). Mesa asked whether Bombardier Service Bulletin 670BA-27-059, Revision A, dated March 8, 2012, or the proposed AD (77 FR 58787, September 24, 2012) applies to its airplanes, since the service information does not reference P/N BA670-93470-5.

We agree that clarification is necessary. Only paragraph (j) of this final rule refers to Bombardier Service Bulletin 670BA-27-059, Revision B, dated September 26, 2013. Paragraph (j) of this final rule affects airplanes having parts identified in paragraphs (j)(1) and (j)(2) of this final rule, and P/N BA670-93470-5 is not identified. Therefore, operators are not required to do the actions specified in paragraph (j) of this final rule on airplanes having P/N BA670-93470-5.

However, airplanes having P/N BA670-93470-5 are still affected by this final rule. This AD applies to airplanes having serial numbers identified in paragraph (c) of this final rule; paragraph (c) of this final rule does not exclude airplanes having specific parts. All operators of the airplanes identified in applicability of this final rule must show compliance with the provisions of this final rule, including a determination that specific paragraphs do not apply. We have not changed this final rule in this regard.

Conclusion

We reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these changes:

- Are consistent with the intent that was proposed in the NPRM (77 FR 58787, September 24, 2012) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (77 FR 58787, September 24, 2012).

Costs of Compliance

We estimate that this AD affects 366 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection [actions retained from AD 2011-03-13, Amendment 39-16597 (76 FR 6539, February 7, 2011)]	2 work-hours X \$85 per hour = \$170 per inspection cycle	\$0	\$170 per inspection cycle	\$62,220 per inspection cycle
Replacement [new action]	8 work-hours X \$85 per hour = \$680	\$1,291	\$1,971	\$721,386

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. “Subtitle VII: Aviation Programs,” describes in more detail the scope of the Agency’s

authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Examining the AD Docket

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2012-0997-0003>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2011-03-13, Amendment 39-16597 (76 FR 6539, February 7, 2011), and adding the following new AD:

2014-02-01 Bombardier, Inc.: Amendment 39-17729. Docket No. FAA-2012-0997; Directorate Identifier 2012-NM-060-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective [INSERT DATE 35 DAYS

AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD supersedes AD 2011-03-13, Amendment 39-16597 (76 FR 6539, February 7, 2011).

(c) Applicability

This AD applies to the Bombardier, Inc. airplanes identified in paragraphs (c)(1) and (c)(2) of this AD, certificated in any category.

(1) Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, serial numbers 10002 through 10333 inclusive.

(2) Model CL-600-2D15 (Regional Jet Series 705) airplanes; and Model CL-600-2D24 (Regional Jet Series 900) airplanes, serial numbers 15001 through 15288 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight controls.

(e) Reason

This AD was prompted by reports of failure of the rudder travel limiter (RTL) return spring. We are issuing this AD to prevent failure of the RTL, which would permit an increase of rudder authority beyond normal structural limits and consequently affect the controllability of the airplane.

(f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

(g) Retained Initial Inspections and Replacement/Repair for Certain Airplanes

This paragraph restates the requirements of paragraph (g) of AD 2011-03-13, Amendment 39-16597 (76 FR 6539, February 7, 2011). Except for Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplane, serial number 10002, for airplanes that have accumulated 4,000 or less total flight hours as of March 14, 2011 (the effective date of AD 2011-03-13): Before the accumulation of 6,000 total flight hours, do a detailed inspection of the RTL for broken return springs and damage through the casing, or chafing of the casing of the primary actuator, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-27-055, Revision A, dated August 6, 2010. Before further flight, replace any broken return springs with new springs, and repair or replace with a new actuator any chafed or damaged primary actuator, as applicable, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-27-055, Revision A, dated August 6, 2010. Repeat the inspection thereafter at intervals not to exceed 6,000 flight hours. Accomplishment of the actions required by paragraph (j) of this AD terminates the requirements of this paragraph.

(h) Retained Initial Inspections and Replacement/Repair for Certain Higher Flight Time Airplanes

This paragraph restates the requirements of paragraph (h) of AD 2011-03-13, Amendment 39-16597 (76 FR 6539, February 7, 2011). Except for Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplane, serial number 10002, for airplanes that have accumulated more than 4,000 total flight hours as of March 14, 2011 (the effective date of AD 2011-03-13): Within 2,000 flight hours after March 14, 2011 (the effective date of AD 2011-03-13), do a detailed inspection of the RTL for broken return springs

and damage through the casing, or chafing of the casing of the primary actuator, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-27-055, Revision A, dated August 6, 2010. Before further flight, replace any broken return springs with new springs, and repair or replace any chafed or damaged primary actuator with a new actuator, as applicable, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-27-055, Revision A, dated August 6, 2010. Repeat the inspection thereafter at intervals not to exceed 6,000 flight hours. Accomplishment of the actions required by paragraph (j) of this AD terminates the requirements of this paragraph.

(i) New RTL Spring Inspection and Replacement for a Certain Airplane

For Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplane, serial number 10002, at the applicable time specified in paragraph (i)(1) or (i)(2) of this AD: Do a detailed inspection of the RTL for broken return springs and damage through the casing, or chafing of the casing of the primary actuator, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-27-055, Revision A, dated August 6, 2010. Before further flight, replace any broken return springs with new springs, and repair or replace with a new actuator any chafed or damaged primary actuator, as applicable, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-27-055, Revision A, dated August 6, 2010. Repeat the inspection thereafter at intervals not to exceed 6,000 flight hours. Accomplishment of the applicable actions required by paragraph (j) of this AD terminates the requirements of this paragraph.

(1) If the airplane has accumulated 4,000 or less total flight hours as of the effective date of this AD: Before the accumulation of 6,000 total flight hours.

(2) If the airplane has accumulated more than 4,000 total flight hours as of the effective date of this AD: Within 2,000 flight hours after the effective date of this AD.

(j) New RTL Spring Replacement

At the applicable time specified in paragraph (j)(1) or (j)(2) of this AD: Replace the RTL return springs with new springs, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-27-059, Revision B, dated September 26, 2013. Do all applicable related investigative and corrective actions before further flight. Accomplishment of the applicable actions required by this paragraph terminates the requirements of paragraphs (g), (h), and (i) of this AD.

(1) For airplanes with RTL return springs having part number (P/N) 670-93465-1: Within 6,000 flight cycles after the effective date of this AD.

(2) For airplanes with RTL return springs having P/N E0650-069-2750S: At the applicable time specified in paragraph (j)(2)(i), (j)(2)(ii), or (j)(2)(iii) of this AD.

(i) For airplanes with 15,400 total flight cycles or more as of the effective date of this AD: Within 2,000 flight cycles after the effective date of this AD.

(ii) For airplanes with 5,200 total flight cycles or more, but less than 15,400 total flight cycles as of the effective date of this AD: Within 5,000 flight cycles after the effective date of this AD, but not to exceed 17,400 total flight cycles.

(iii) For airplanes with less than 5,200 total flight cycles as of the effective date of

this AD: Before accumulating 10,200 total flight cycles.

(k) Credit for Previous Actions

(1) This paragraph provides credit for the actions required by paragraphs (g) and (h) of this AD, if those actions were performed before March 14, 2011 (the effective date of AD 2011-03-13, Amendment 39-16597 (76 FR 6539, February 7, 2011)), using Bombardier Service Bulletin 670BA-27-055, dated May 11, 2010, which is not incorporated by reference in this AD.

(2) This paragraph provides credit for the actions required by paragraph (j) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 670BA-27-059, dated October 12, 2011; or Bombardier Service Bulletin 670BA-27-059, Revision A, dated March 8, 2012; which are not incorporated by reference in this AD.

(l) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office (ACO), ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC

approval letter must specifically reference this AD. AMOCs approved previously in accordance with AD 2011-03-13, Amendment 39-16597 (76 FR 6539, February 7, 2011), are approved as AMOCs for this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(m) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2010-18R1, dated March 19, 2012, for related information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2012-0997-0003>.

(2) Service information identified in this AD that is not incorporated by reference may be obtained at the addresses specified in paragraphs (n)(5) and (n)(6) of this AD.

(n) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Bombardier Service Bulletin 670BA-27-059, Revision B, dated September 26, 2013.

(ii) Reserved.

(4) The following service information was approved for IBR on March 14, 2011 (76 FR 6539, February 7, 2011).

(i) Bombardier Service Bulletin 670BA-27-055, Revision A, dated August 6, 2010.

(ii) Reserved.

(5) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; email thd.crj@aero.bombardier.com; Internet <http://www.bombardier.com>.

(6) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(7) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on January 10, 2014.

Jeffrey E. Duven,
Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

[FR Doc. 2014-02468 Filed 02/06/2014 at 8:45 am; Publication Date: 02/07/2014]